SURY

LA infinite security for combining oxygen and that inmotion a form, the burner security conserving
a burner block formed in include a forme character burning
in hist opening and an order opening.

byper means the continuing oxygen orbide of the forme
character to the context opening of the forme character to the context opening of the forme character,
as oxygen couply beauting including of the forme character
to the burner block, the heavy well being formed to
include first spectrum means first discharging oxygen
from the character means first discharging oxygen from the
character masses into the bypers means \$8.1 of first
and second aparture means
meterring the supply of carygen.

passing there through, and
means for discharging first into the firme character formed:

In the burner block, the discharging means facturing a
marke examining through the character means and the
first spectrum means formed in the base wall and
supported by the base wall in the

5000

13. A burner assembly for combining oxygen and fuel to produce a flame, the burner assembly comprising

a burner block formed to include a flame chamber having an inlet opening and an outlet opening, bypass means for conducting oxygen outside of the flame chamber to

the outlet opening of the flame chamber;

an oxygen-supply housing including chamber means for receiving a supply of oxygen and a base wall adjacent to the burner block, the base wall being formed to include first aperture means for discharging oxygen from the chamber means into the flame chamber and second aperture means for discharging oxygen from the chamber means into the bypass/means,

wherein the discharging means further includes a removable collar engaging the nozzle and threadedly engaging the oxygen-supply housing, and

[The furmer assembly of claim 12.] wherein the oxygensupply housing includes an annular lip defining a cylindrical nozzle aperture receiving the nozzle and the removable collar includes an annular side wall surrounding and engaging the annular lip. Sign

16. A honor countilly for combining oxygen and fuel to markets a flame, the honor casuably complying

a inscer block flamed to include a flame climater laving satisfiet opening and an outlet opening.

rypass means for conducting cayyans conside of the financhamber to the cules opening of the fame chamber,

means for discinantly first has the farm chamber formed in the business block [and]

an oxygen-empty bossing including chamber means for necessing a supply of oxygen and a base well adjacent to the humar block, the base well being framed to include first spectrum means for declarating oxygen from the chamber means for discharging oxygen from the chamber means has the bypast means again first chamber means has the bypast means, said first and second aparture means metaring the supply of oxygen passing there

through, the oxygensupply housing infiniting a hollow stell appended to the base well to/delice the chamber maste thurshoteem, wherein no hollow shell has a pyramidal shape and includes at least one triangular side well appended to the base well and formed to include an oxygen-

wherein the means for discharging fuel extends through the base wall

21. A burser assembly for communing oxygen and find to

produce a firme, the homer assembly comprising
'a former block intend to include a finuse chamber having
an inlet opening and an outlet opening.

bypass means the conducting/oxygen candide of the fisme chamber to the order opening of the fisme chamber,

means for discharging fire/into the fisme chamber firmed | in the humer block, and

an oxygen empty housing including chamber means for necessing a supply of oxygen and a bass wall adjacent to the houser block, the base wall being formed to include first appears means for discharging oxygen from the chamber means into the farms chamber and second spectrum means for discharging oxygen from the chamber means into the bypess means, 5a.1d. first and second spectrum a second spectrum as means and second spectrum as a second second spectrum as a second second spectrum.

the supply of oxygen passing there through

the base wall and extending thousand includes the company of the pass and a side will extending between the the and the base wall, the tip is formed to include an apartum, and the discharging means include a apartum, and the base wall.

The base wall and extending incomps

the specture forward in the tip and the flot specture meson formed in the base well and terminating in the inict opening of the flame chamber.

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29. A burner assembly for combining oxygen and find in notice a fiame, the burner assembly comprising

a homer block formed to include a flame/chamber having an inlet opening and an oatlet opening,

bypase means for conducting oxygen/outside of the flame chamber to the outlet opening of the flame chamber, means for discharging fuel into the flame chamber formed

in the burner block, and

an oxygen-supply housing including chamber means for neceiving a supply of oxygen and a base wall adjacent to the borner block, the base wall being formed to include first specture for discharging oxygen from the chamber means into the flame chamber and. second apenture means for discharging oxygen from the chamber means into the bypass means, Said first and/second aperture means

metering, the supply of oxygen passing/there through and with the oxygen

supply housing further including a hollow shell ppended to the base wall to define the chamber means

36. A burner assembly for combining oxygen and fifel to produce a flame, the burner amountily commissing

a burner block funned to include a fisme clamber having an inlet opening and an outlet opening.

bypess means for conducting oxygen outside of the fiame chamber to the outlet opening of the flame chamber, means for discharging fuel into the flame chamber formed

in the burner block

an oxygen-supply housing inclining chamber means for neceiving a supply of oxygen and a/neso wall adjacent to the burner block, the base wall being formed to include first specture means for discharging oxygen from the chamber means into the flame chamber and second aperture means for discharging oxygen from the chamber means into the bypass means, said first and second aperture means metering

supply of oxygen passing there

through, the burner block

being formed to include at least one oxygen-admission port lying adjacent to the base wall and communicating with the second aperture means and the bypess means being compled to the oxygen-admission port and arranged to pass through the burner block to conduct oxygen from the chamber means through the burner block to the outlet opening of the fixme chamber, the second aparture/means including a plurality of wall d in the base wall, the humar block aperiumes firm being formed/to include an oxygen-admission post communicating with each wall aperture, and frame means for supporting the burner block, the hase well being mounted on the frame means, the burner block being formed to include an annular channel around the inlet opening of the flame chamber, the frame means including means for covering the annular channel to n ammiar oxygen-conducting passageway therein and means for communicating oxygen discharged from the chamber means through the wall as to the annular oxygen-conducting passageway for delivery to the outlet opening of the flame chamber through the bypass means, and

the means for discharging is supported by the base wall.

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37. A burner assembly for combining caygen and fuel to moduce a flame, the burner assembly comprising

a humer block finance to include a flame chamber having an inlet opening and an outlet opening,

bypass means for conducting oxygen outside of the flame chamber to the outlet opening of the flame chamber, means for discharging fuel into the flame chamber furned in the barner block, and

an oxygen-supply housing including chamber means for receiving a supply of oxygen and a base wall adjacent to the burner block, the base wall being formed to include first aperture means for discharging oxygen from the chamber means for discharging oxygen from the chamber means for discharging oxygen from the chamber means into the bypass means said first

and second aperture means metering the Supply of oxygen passing

there through, the discharging means including a fuel discharge notale and means for fixing the faci discharge nozzie in the inlet opening, the fixing means being positioned to lie between the base wall and the burner/block, the fixing means being formed to include third spentire means for conducting oxygen discharged flavough the first aperture means into the flame chamber, the third aperture means defining a first-etage oxygen port having a first effective cross-sectional area and communicating oxygen from the chamber means into the flame chamber, the second aperture means defining a second-stage oxygen port having a second effective cross-sectional mess less than the first effective cross-sectional area and communicating exyges from the chamber means to the outlet the flame chamber through the bypass opening means.

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